

San Joaquin Valley Unified Air Pollution Control District

PERMIT UNIT: N-846-2-2

EXPIRATION DATE: 1/31/99

EQUIPMENT DESCRIPTION:

ONE (1) 20 MMBTU/HR NORTH AMERICAN OIL HEATER.

Permit Unit Requirements

1. The oil heater shall be fired on crude oil (sulfur content not to exceed 2.5 % by weight) only. Permittee shall maintain records of fuel invoices, monthly fuel consumption, and fuel sulfur content. Records shall be retained for at least five years and provided to the District upon request. [District Rules 2520, 9.4.2, 9.5.2; 4301, 5.2.1; 4801, 3.1] Federally Enforceable Through Title V Permit
2. The heater shall be tuned at least annually, using one of the procedures described in Attachment 3404-A or 3404-B of District Rule 4304 (adopted October 19, 1995). Records of tune-ups and maintenance shall be maintained. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. Particulate matter emissions from the oil heater shall not exceed 0.1 grain per cubic foot of gas at dry standard conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb. PM/hr. Compliance shall be demonstrated by source testing, using the following methods: PM (EPA Method 5), stack gas velocity (EPA Method 2), and stack gas moisture (EPA Method 4). [District Rule 4201, 3.1; 4301, 5.1, 5.2.3] Federally Enforceable Through Title V Permit
4. Nitrogen oxide emissions shall not exceed 140 lb/hr, calculated as nitrogen dioxide (NO₂). For crude oil fuel, compliance may be demonstrated by monthly fuel testing for nitrogen content and heating value. Hourly emissions shall be calculated using the heating value, maximum rated unit capacity, and the following formula: $\text{lb NO}_2/1000 \text{ gal} = 20.54 + 104.39 (N)$, where N is the weight % nitrogen in the fuel. If compliance with the NO_x emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 4301, 5.2.2; 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. The nitrogen content of crude oil fuel shall be determined using ASTM D3431-80. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. The oil heater shall not emit in excess of 200 pounds per hour of sulfur compounds, calculated as sulfur dioxide (SO₂). When firing crude oil, compliance with this requirement shall be demonstrated by testing the fuel sulfur content and determining the maximum hourly emissions of sulfur compounds by multiplying the fuel sulfur content as lb SO₂/MMBtu, by the maximum heat input rating of the unit as MMBtu/hr. [District Rules 2520, 9.4.2; 4301, 5.2.1] Federally Enforceable Through Title V Permit
7. Discharge of sulfur compounds from the oil heater shall not exceed in concentration at the point of discharge 0.2 percent by volume calculated as sulfur dioxide (SO₂), on a dry basis averaged over 15 consecutive minutes. To demonstrate compliance with this requirement for crude oil fuel, the operator shall test the fuel sulfur content and demonstrate it does not exceed 3.0% by weight. [District Rule 4801, 3.1] Federally Enforceable Through Title V Permit
8. Crude oil fuel shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive months, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to

show compliance, monthly testing shall resume. The sulfur content of crude oil shall be determined using ASTM D 4294 (x-ray diffraction method). The fuel higher heating value shall be determined by ASTM D 240-87 or D 2382-88. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. The heat input from use of natural gas and crude oil shall not exceed 90 billion Btu/year. [District Rule 4305]

10. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and Fresno County Rule 108.1] Federally Enforceable Through Title V Permit

11. Source testing shall be performed within 60 days of initial Title V permit issuance to demonstrate compliance with PM permit emission limits, unless such testing has been performed within the prior 12 month period and the test results showed compliance with PM emission limits of this permit. Thereafter, source testing shall be performed annually to demonstrate compliance with PM emission limits. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. In lieu of annual PM source testing of each unit, compliance may be demonstrated by submittal of annual source test results to the District from unit(s) representing a group of units, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required PM emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. The following conditions must be met for representative unit(s) used to demonstrate compliance for a group of units: 1) all units are initially source tested and emissions from all units in the group are similar, 2) all units in the group are similar in terms of rated heat input, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) all units in the group shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If source testing a representative unit, the representative unit source tested to demonstrate compliance shall be rotated, so that when 2 source test cycles have been completed, both units (N-846-1 and N-846-2) will have been tested. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. While firing on crude oil, the permittee shall inspect the heater exhaust stack weekly for excessive visible emissions. The inspection shall include verifying the equipment is performing normal, designed functions and is being operated according to standard procedures, and per the manufacturer's recommendations. If the equipment is not performing according to design and procedures or if excessive visible emissions are observed from the exhaust stack, the permittee shall take corrective action within 24 hours. If excessive visible emission cannot be corrected within 24 hours, EPA Method 9, except for data reduction (section 2.5), shall be conducted to determine compliance with the 20% facility-wide opacity limit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. The permittee shall maintain the following records with regards to weekly visible emission/equipment inspections, while firing on crude oil: 1) date and time of inspection, 2) stack or emission point identification, 3) operational status/conditions of the heater, 4) observed results and conclusions, 5) description of corrective actions taken to resolve any observed excessive visible emissions, 6) date and time excessive visible emissions corrected, 7) date of Method 9 test and results if corrected, and 8) name of person(s) performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit